IN THE CLAIMS:

Set forth below in ascending order, with status identifiers, is a complete listing of all claims currently under examination. Changes to any amended claims are indicated by strikethrough and underlining. This listing also reflects any cancellation and/or addition of claims.

1. (Currently amended) A magnetic enrichment method comprising:

(a) placing micro particles (22) that bind to a ~~desired~~ biological component, into a solution (23) comprising ~~a desired~~ the biological component, in a reactor vessel (26);

(b) allowing the micro particles (22) to bind to the biological component in the solution (23) in a closed reactor unit (60) under controlled conditions, wherein the closed reactor unit (60) comprises a magnetic unit (10) comprising at least one magnet (13), a ferromagnetic tube (12), and the reactor vessel (26), wherein conditions in the closed reactor unit (60) are controllable and

wherein the at least one magnet (13) and the ferromagnetic tube (12) can each be moved in relation to each other in order to adjust the magnetic field strength of the at least one magnet;

(c) using the magnetic unit (10) to collect the desired biological component bound to the micro particles (22) in the solution (23) in the closed reactor unit (60); and

(d) enriching the desired biological component by releasing the component into another solution,

wherein the micro particles are magnetic.

2. (Currently amended) The method according to claim 1, wherein enriching the ~~desired~~ biological component comprises:

opening the closed reactor unit (60);

removing the collected micro particles (22) from the reactor vessel (26) with the magnet unit (10); and

releasing the collected micro particles (22) into a solution of another vessel.

3. (Currently amended) A method for magnetic[[,]] binding~~, isolation, purification, or enrichment~~ of a biological component, comprising:

(a) placing micro particles (22) having an enzymatic activity and/or binding properties into a solution (23) or on the surfaces of a reactor vessel (26)~~, to bind, isolate, purify, or enrich biological components from the solution~~;

(b) mixing the micro particles (22) in the solution (23) in a closed reactor unit (60), wherein the closed reactor unit (60) comprises a magnetic unit (10) comprising at least one magnet (13), a ferromagnetic tube (12) and the reactor vessel (26) and

wherein the at least one magnet (13) and the ferromagnetic tube (12) can each be moved in relation to each other in order to adjust the magnetic field strength of the at least one magnet;

(c) carrying out a~~-desired enzymatic reaction and/or~~ binding reaction in the closed reactor unit(60), thereby binding the biological component to the micro particles~~, isolating, purifying, or enriching biological components from the solution~~;

(d) using the magnet unit (10) to collect the micro particles (22) from the solution (23);

(e) opening the closed reactor unit (60);

(f) removing the micro particles (22) from the reactor vessel (26) with the magnet unit (10); and

(g) transferring the ~~microparticle~~micro particles (22) into a solution in another vessel,

wherein the ~~microparticle~~micro particles are magnetic.

4. (Currently amended) The method according to claim 1 or claim 3, wherein the micro particles (22) in ~~a~~ the closed reactor unit (60) form a thin layer over the magnet unit (10); over a protective membrane (21) of the magnet unit (10); or on the inner surface of the closed reactor unit (60) by a magnet (13) placed outside the closed reactor unit (60).

5. (Currently amended) The method according to claim 1 or claim 3, wherein the closed reactor unit (60) comprises channels (62) for rotating solution (23) in and out of the reactor unit (60); for adding sample into or removing sample from the closed reactor unit (60); for controlling gases or liquid added into the closed reactor unit (60), controlling pH value in the

closed reactor unit (60) and controlling salt content in the closed reactor unit (60); or for filtering gases or liquid added into the closed reactor unit (60).

6. (Currently amended) The method according to claim 1 or claim 3, wherein several closed reactor units (60) are placed in an environmental cabinet (70), wherein the environmental cabinet controls the temperatures of the closed reactor units (60), rotation speeds of the magnets (13), gas exchange, sampling and additions of samples or solutions (23) into the closed reactor units (60).

7. (Currently amended) The method according to claim 1 or claim 3, wherein the magnet unit (10) of ~~a~~ the closed reactor unit (60) is released from the reactor vessel (26), and the micro particles (22) and biological components bound to micro particles (22) are washed and enriched in separate vessels from the reactor vessel (26).

8. (Currently amended) The method according to claim 1 or claim 3, wherein the solution (23) and the micro particles (22) in ~~a~~ the closed reactor unit (60) are mixed by movement of projections or depressions inside the outer surface of the reactor vessel (26).

9. (Currently amended) The method according to claim 1 or claim 3, wherein efficient movement of the solution (23) inside the closed reactor unit (60) is provided by directing the solution (23) between the micro particles (22); by directing the solution (23) as a flow passing the magnet unit (10); by moving the magnet unit (10) in relation to the walls of the reactor vessel (26) to mix the solution (23); by moving the walls of the reactor vessel (26) in relation to the magnet unit (10) to mix the solution (23); or by pumping the solution (23) inside the closed reactor unit (60).

10. (Currently amended) The method according to claim 1 or claim 3, wherein the solution (23) is directed to pass a narrowing (73) between the reactor vessel (26) and the magnet unit (10), in the middle of the closed reactor unit (60), by rotating the closed reactor unit (60) around its longitudinal axis or by rocking the closed reactor unit (60).

11. (Previously presented) The method according to claim 1 or claim 3, wherein the solution (23) is mixed by movement of a flexible element (75) in the magnet unit (10).

12. (Currently amended) The method according to claim 1 or claim 3, wherein the reactor vessel (26) comprises a stretchy material, and wherein the solution (23) is mixed by pushing the bottom of the reactor ~~unit~~ vessel (26) downwards.

13. (Previously presented) The method according to claim 1 or claim 3, wherein any of the following are bound to the surface of the micro particle (22): protein, antibody, peptide, enzyme, Protein A, Protein G, avidin, streptavidin, biotin, Cibacron blue, proteamine, pepstatin, PEG, lysine, BSA, NTA, EDTA, IDA, polysaccharide, lectin, one-or two-stranded nucleotide sequence, DNA, RNA, mRNA, LNA, PNA, bacteria, virus, yeast or cell.

14. (Currently amended) The method according to claim 1 or claim 3, wherein the micro particles (22) bound to the biological component, are further used to carry out chromatographic purification.

15. (Currently amended) The method according to claim 1 or claim 3, wherein the micro particles (22) bound to the biological component, are further used to isolate or enrich biological components selected from the group consisting of: pathological bacteria, viruses, parasites, or protozoans.

16. (Currently amended) The method according to claim 1 or claim 3, wherein the micro particles (22) bound to the biological component, are further used to purify a biological component selected from the group consisting of: DNA, RNA, mRNA, proteins, peptides, cells or cell organelles.

17–36. (Canceled)

37. (Previously presented) The method of claim 14, wherein chromatographic purification is selected from the group consisting of ion exchange chromatography, reverse phase chromatography, hydrophobic chromatography and affinity chromatography.

38. (Previously presented) The method of claim 15, wherein the pathological bacteria are selected from the group consisting of *Salmonella*, *Listeria*, *Escherichia coli* O157 and *Clostridium*.

39. (New) The method of claim 1 or claim 3, wherein the magnetizing axis of the at least one magnet is transverse in relation to the longitudinal axis of the ferromagnetic tube.